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ABSTRACT

This pamphlet surveys the last ten years of a Pennsylvania assessment program called Educational Quality Assessment (EQA). The assessment, mandated by state law, measures student achievement in ten goal areas. Pamphlet topics cover legislation and history, administration of the program, the EQA inventory, and the school report. (Author/LD)

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EDUCATIONAL QUALITY ASSESSMENT IN PENNSYLVANIA

A Decade of Progress

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PREAMBLE

The constitution of the Commonwealth of Pennsylvania states, "The General Assembly shall provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth." This provision mandates a quality education for each child in the Commonwealth.

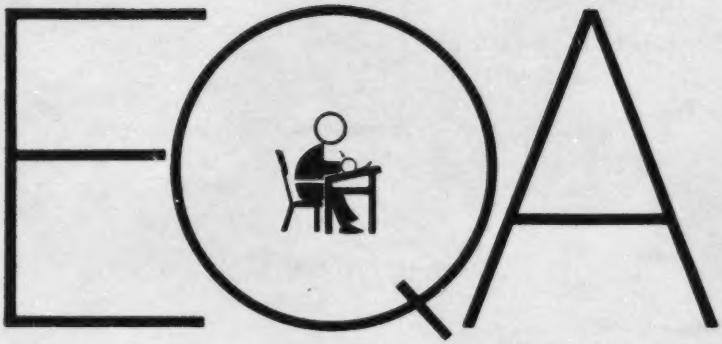
The schools have the primary responsibility for the achievement of the goals of quality education as established by the State Board of Education, but they must work in close and continuous cooperation with the family, community and other appropriate social, religious and governmental institutions to insure the highest possible achievement of the goals.

To foster achievement of a quality education, the school environment should be safe, attractive and orderly, promote a willingness to work for objectives, stimulate a readiness to continue learning throughout life, and encourage the fullest possible educational development of each student.

To foster achievement of a quality education, the school program should reflect the following goals. *(See listing of Goals of Quality Education on inside back cover).*

EDUCATIONAL QUALITY ASSESSMENT IN PENNSYLVANIA

A Decade of Progress



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Grateful appreciation is extended by the author to James F. Hertzog, *Basic Education Associate*, for his assistance in compiling the materials for this publication, which is a revised edition of the previously published *Educational Quality Assessment: A Profile of Pennsylvania's Program* in 1976.

What is Quality Education?

The quality of education has long been a matter of public scrutiny. With the costs of education going up – and students' scores on achievement tests going down – people are more concerned than ever about what children are learning and how well they're learning it.

Just what is quality education? When is a school really *good*? When more students go on to college? When it has more Merit Scholars? When it has a superior athletic team? When parents believe it is good? When the school officials themselves say it is? Traditionally, these proxy measures have been the popular yardsticks to determine whether a school is offering quality education.

Devising a more objective, systematic means of evaluating a school's performance has been – and continues to be – the main purpose behind Pennsylvania's Educational Quality Assessment (EQA) program, in operation since 1970.

The Pennsylvania Plan

Pennsylvania's Educational Quality Assessment program is a very comprehensive approach to the assessment of education. Although most states are involved with various assessment or accountability programs, Pennsylvania's Plan has some distinctive features.

First, Pennsylvania's model includes an assessment of the social and personal development of a student in addition to his/her academic achievement; and second, it recognizes that learning involves not only the school, but also, and very importantly, the home and community.

One of the great contributions of the Pennsylvania Plan is its awareness that schools have responsibilities other than the 3 R's. The original goals established in 1965 (listed on page 10) and the adoption of a revised set of Goals of Quality Education by the State Board of Education in March 1979 (listed on inside back cover) are not new ideas in educational circles; in fact, they are similar to the **Seven Cardinal Principles of Education** formulated in 1918 by the National Education Association.

Another important feature of the Pennsylvania Plan is its recognition that schooling does not take place in a vacuum, that what a school can accomplish is influenced, or possibly restricted, by the resources at its disposal – whether physical, financial or human. EQA is aware that the effect of a school on a child is intrinsically related to the influence of the home and/or community.

Responses to Assessment

Contrary to the suspicions of some critics, school officials - as well as the general public – are eager to obtain objective information about their schools, their teachers and their students.

Teachers and their organizations are also recognizing and accepting the public's call for accountability. Albert Shanker, president of the American Federation of Teachers, has written:

The public schools are supported by taxes because schools are there to accomplish public purposes, and the public has a right to know the extent to which these purposes are or are not being achieved...Test results might well become the best weapon that organized teachers have in their struggle for school improvement...Poor scores may well turn out to be a measure of the additional investment that must be made in our public schools if educational retardation is to be overcome.

Schools have vastly differing resources

Pennsylvania's assessment program operated on a strictly voluntary basis between 1970 and 1973. When the EQA program was first announced, the initial response was so overwhelming that the Department of Education could not accommodate all the schools volunteering to participate. More than 60 per cent of Pennsylvania's 505 school districts requested that their schools be assessed the first year – a physical and financial impossibility at that time. Ultimately, 302 school districts and over 180,000 students voluntarily participated in the EQA program the first three years. That the majority of Pennsylvania's school districts were receptive to a voluntary assessment of their elementary and secondary schools is indeed significant.

To insure a wider sampling and data base, the State Board of Education passed a resolution on November 9, 1973 stating:

> During the school years 1973-74, 1974-75 and 1975-76, the Department of Education shall use the EQA procedure to evaluate the effectiveness of the educational program for *all* Commonwealth school districts based upon the Ten Goals of Quality Education adopted by the State Board of Education. Public schools housing approximately one-third of the students enrolled in each of the three grades – 5th, 8th and 11th – will be included in the assessment each year.

Under this mandate, about 500,000 fifth, eighth and eleventh grade students in Pennsylvania's 505 school districts participated in the EQA program by the end of the 1975-76 school year – the third and last year of the Commonwealth's mandatory three-year assessment cycle.

In the spring of 1976, the State Board of Education approved plans to completely review the EQA goals and instruments. As a result of this decision, school districts since that time are and have been participating in the assessment program on a voluntary basis.

During the 1976-77 school year, 110 districts – comprising 674 schools and 71,500 students – participated voluntarily in the EQA program, administering essentially the same battery of student questionnaires as used during the mandatory period.

During the 1977-78 school year, when 113 districts participated, and 1978-79 school year, when 125 districts participated – all on a voluntary basis – several changes had occurred in both the assessment procedure and in the questionnaire items themselves. Previous assessments took about four hours to complete because students answered *all* the questions on a 400-item test battery.

By employing a new assessment technique called *matrix sampling*, the administration time was cut in half, yet the number of items increased by nearly 50 per cent. Students now are required to respond only to a particular portion (form) of the expanded test battery, although each portion (form) is well balanced with respect to item content so that a total school score may still be computed with statistical validity.

The questionnaire items, too, have been carefully scrutinized and updated to reflect a significant emphasis and expansion of the basic skills and general knowledge areas, particularly with regard to Goal III (Basic Skills: Reading, Writing and Mathematics), Goal V (Knowledge of Law/Government), and Goal IX (Knowledge of Human Accomplishments).

Meanwhile, the State Board of Education initiated a comprehensive review of the Ten Goals of Quality Education in early 1977. Interested parents, citizens, lay and pro-

fessional groups throughout the state became actively involved in this review process, which continuing effort resulted in an expansion and resivion of the goals.

At its meeting on March 8, 1979, the State Board of Education adopted, as a policy statement, a revised set of Goals of Quality Education (listed on the inside back cover) and an accompanying preamble (printed on inside front cover). Many of the new goals are closely related to the original ones with the exception of Family Living and Environment, which represent goal areas not previously included.

The Educational Quality Assessment program continues to administer its assessment process in relation to the original Ten Goals of Quality Education, while conducting on-going research on the selection of future test items with a firm commitment to modify and/or expand the instruments to reflect the revised set of goals adopted by the State Board of Education.

What Assessment in Pennsylvania Is and Is Not

Although some people want to equate assessment with accountability, the two are not necessarily synonomous. In Pennsylvania's assessment program, the *school* is the unit of analysis, not the classroom, not the individual student and not the school district. Neither the teacher, nor the students, nor the school district is held accountable for a particular school's score.

Student scores are not aggregated for Ms. Johnson's 5th grade, for example. Why not? Ms. Johnson's 5th graders did not come to her as a *"blank slate"* – their knowledge and attitudes are a product of *all* their years of schooling. Nor did her students come to her equally prepared. Some of her 10-year-olds arrived in 5th grade knowledgeable and eager to continue learning. Others came poorly prepared, perhaps with their self-esteem destroyed after four previous years of schooling. Such disparate backgrounds of students are what make *"teacher accountability"* a difficult concept to assess and one not intended by the designers of the Pennsylvania Plan.

Scores are not produced for individual students. Since students do not sign their names on the answer sheets, it is impossible to identify a particular student. Because the pupils are promised anonymity, they can feel free to answer honestly without fearing reprisal or giving the *"social desirable"* response. Such precautions are particularly important in attitudinal testing – possibly even more so because some of the attitudes sampled measure students' feelings toward the school and the teachers.

If the student's achievement level on a given school subject is desired, schools can select, from the array of standardized tests on the market, those tests most helpful to them, administer them at a convenient time of the year and get the results within a few weeks.

Additionally, student scores on the EQA are not accumulated for the entire school district, but for each school within the district. It is not at all uncommon for the differences among schools in a district to be as marked as differences among districts. Indeed, many a town, and thereby school district, has a *"wrong side of the tracks"* served by that American institution, the neighborhood school, where the less privileged students score lower on almost any academic measure.

What else is assessment *not*? It is not a vehicle through which the Commonwealth attempts to standardize curriculum throughout the state. The Pennsylvania Department of Education does not intend to impose any demands on a school which may fall below the state mean on one or more of the goals. The decision of whether to take action on the EQA results is left to the local school district. To tell a school it is *"good"* or *"bad"* is not the purpose of EQA.

What, then, *is* assessment? It is a means to measure students' attainment of the Goals of Quality Education, which schools ideally should be achieving. EQA is a state plan that gives schools information about what their students know and feel, their teachers' perception of the school and community, and how these attitudes compare to those in schools throughout the Commonwealth. This information is obtained from the EQA questionnaires given to both students and teachers.

The key word in assessment is *information*. From the compiled data, the school district can make its own value judgments. This is in keeping with the tenor of the state law which inspired assessment. The law states that assessment should provide *"relevant comparative data to enable directors and administrators to more readily appraise the educational performance and to effectuate without delay the strengthening of the districts' educational program."* It is neither the role, nor the intent, of state officials to make value judgments.

Legislation and History

Educational Quality Assessment in the Commonwealth of Pennsylvania began with Section 299.1 of Act 299, August 8, 1963, generally known as the School District Reorganization Act. Before this mandate, the General Assembly held meetings at which representatives of large school districts argued that districts should be reorganized into even larger districts so that city schools could be grouped with noncity schools. They believed that reorganization would provide more equitable quality education. At the same time, advocates of smaller districts testified that smaller units provided a more homogeneous, personal education and, thus, a better quality education.

The outcome of the debate was an attempt to assuage both sides. The General Assembly passed Act 299, part of which required the State Board of Education to:

> ...develop or cause to be developed an evaluation procedure designed to measure objectively the adequacy and efficiency of the educational program offered by the public schools of the Commonwealth. The evaluation procedure to be developed shall include tests measuring the achievements and

performance of students pursuing all of the various subjects and courses comprising the curricula. The evaluation procedure shall be so constructed and developed as to provide each school district with relevant comparative data to enable directors and administrators to more readily appraise the educational performance and to effectuate without delay the strengthening of the districts' educational program. Tests developed under the authority of this section to be administered to pupils shall be used for the purpose of providing a uniform evaluation of each school district and the other purposes set forth in this subdivision. The State Board of Education shall devise performance standards upon completion of the evaluation procedure required by this section.

As a first step in carrying out the requirements of this act, the State Board of Education appointed from among its members a Committee on Quality Education. One of the committee's first tasks was to define the purposes of education. As a result of his or her education, what should a child be and be able to do? With the help of behavioral scientists and civic and professional leaders, the committee formulated the state's goals for education. Upon the recommendation of the committee, the State Board of Education adopted the Ten Goals of Quality Education in November 1965, which have been in use since that time.

In considering what the goals of education should be, the committee felt that the school played an important role in the overall development of a student. This development includes not only the student's academic achievement but also his or her personal and social growth. While the committee repeatedly stressed the importance of basic academic skills, it felt the school should encourage and foster the abilities, beliefs and habits that contribute to responsible citizenship, vocational awareness and potential, and total personal growth. Pennsylvania's Ten Goals of Quality Education reflect these sentiments. When the committee members asked business and civic leaders to rank the goals in order of importance or priority, the business and civic leaders gave equal emphasis to each.

PENNSYLVANIA'S ORIGINAL TEN GOALS OF QUALITY OF EDUCATION

(Adopted by the State Board of Education in 1965)

Quality education should:

I. Help every child acquire the greatest possible understanding of himself or herself and appreciation of his or her worthiness as a member of society.

II. Help every child acquire understanding and appreciation of persons belonging to other social, cultural and ethnic groups.

III. Help every child acquire, to the fullest possible extent, mastery of the basic skills in the use of words and numbers.

IV. Help every child acquire a positive attitude toward the learning process.

V. Help every child acquire the habits and attitudes associated with responsible citizenship.

VI. Help every child acquire good health habits and an understanding of the conditions necessary for maintaining of physical and emotional well being.

VII. Give every child opportunity and encouragement to be creative in one or more fields of endeavor.

VIII. Help every child understand the opportunities open to him or her to prepare for a productive life and help each child take advantage of these opportunities.

IX. Help every child to understand and appreciate as much as possible of human achievement in the natural sciences, the social sciences and the humanities and the arts.

X. Help every child to prepare for a world of rapid change and unforeseeable demand in which continuing education throughout adult life should be a normal expectation.

The Revised Goals of Quality Education, adopted by the State Board of Education on March 8, 1979, are found on the inside back cover.

In 1967, the PDE formed the Bureau of Educational Quality Assessment to translate the mandates of the act and the wishes of the State Board of Education into a workable plan of assessment. This project was initially conceived as a three-phase developmental plan.

Phase I consisted of using available standardized tests and developing measurement instruments for goals on which no tests were available. After the entire package was field tested, it was again analyzed with the rewording, addition or deletion of some test items. At the same time the EQA questionnaires were being scrutinized, bureau members were identifying the resources and conditions that affect student achievement.

The establishment of normative standards to give some meaning to student scores occurred during Phase II. To accomplish this task, the bureau administered the questionnaire to a large representative sample of diverse schools.

The results provided data with which to compare the schools assessed during Phase III. This phase, which continued from 1970 thru 1973, assessed elementary and secondary schools on a voluntary basis.

From 1974 through the 1975-76 school year, a three-year mandatory assessment cycle was completed. In this plan, school assessed in a particular school year provide the norm for comparison, and each year a separate statewide sample is used.

During the 1976-77, 1977-78 school years, the EQA program was administered on a voluntary basis in accordance with the State Board of Education's decision to review the goals and instruments as previously described.

The following table summarizes the number of districts, schools, grade levels and students participating both voluntarily and nonvoluntarily to date:

	No. of Districts	No. of Schools	Grade Level	No. of Students
1970-73*	243	998	5	65,000
	55	63	7	15,650
Voluntary	96	148	9	34,850
	243	232	11	65,000
1973-74	168[1]	785	5	51,342
		240	8	53,126
Mandated Cycle 1		191	11	48,276
1974-75	166[2]	813	5	54,445
		265	8	58,049
Mandated Cycle 2		202	11	52,296
1975-76	164[3]	674	5	44,008
		232	8	47,288
Mandated Cycle 3		179	11	40,643
		9	Vo-Tech	3,125
1976-77	110[1]	403	5	22,300
		152	8	26,500
Voluntary		119	11	22,700
1977-78	113	453	5	29,956
New Instruments		151	8	30,876
Initiated		128	11	28,653
1978-79	125	490	5	28,301
		177	8	31,680
		148	11	28,262
1979-80	170	About 1200 total	5 8 11	

*In the voluntary assessment some districts participated more than one time; however, 302 different districts were involved during this period.

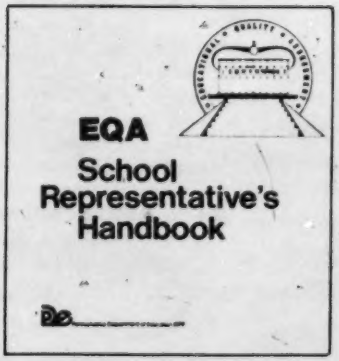
[1]Plus 1/3 Pittsburgh [2]Plus 1/3 Pittsburgh and 1/3 Philadelphia
[3]Plus 1/3 Philadelphia

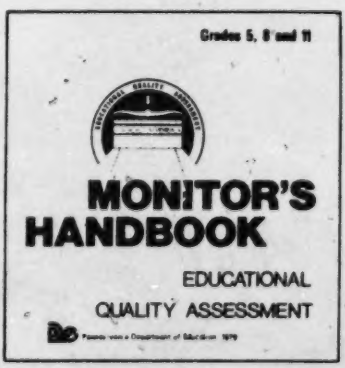
Administration of the Assessment Program

In August the Division of Educational Quality Assessment notifies school districts of the upcoming assessment the following March. When returning the initial forms, the district superintendent nominates a school representative for each of the three grade levels–5th, 8th and 11th. As a contact person between that district and EQA, each representative attends a regional workshop to learn about EQA duties, responsibilities and background. They also examine sample school reports to learn what they can expect in return for their efforts.

District representatives administer teacher questionnaires to gain additional information about the school from the teacher's perspective as well as information about the teachers. Teachers answer anonymously, placing only the district name and school name on the questionnaire. Classroom teachers spending more than 50 percent of their time in classroom instruction fill out the questionnaires.

Parents of the students to be tested are told about the EQA testing and have an opportunity to review the questionnaires. Parents may exclude their children from testing by notifying the school principal in writing.





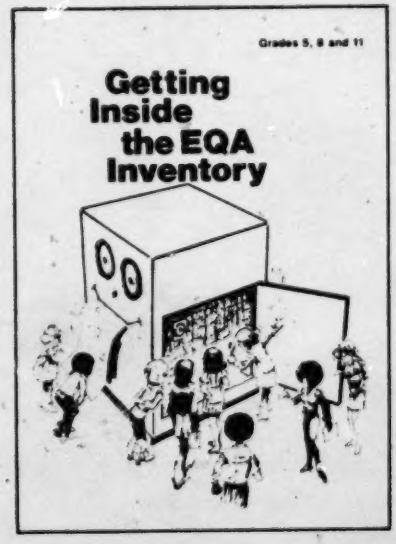
EQA School Representative's and Monitor's Handbooks

Although school districts have an option to use large-group sessions, many use the classrooms as test sites and the teachers as monitors. Answering the questionnaires takes two to 2-1/2 hours of student time. Most districts give the questionnaire in two sittings on consecutive days for 5th graders and in one sitting for 8th and 11th graders. Though the *Monitor's Handbook* lists time ranges that might be expected for each section, students are given ample time to finish each section.

To assure confidentiality and anonymity of responses, the students do not put their names on the answer sheets. The students are told that they can skip any item they feel is too personal.

Parents' occupational and educational information for grade 5 students is obtained from school records or parent survey forms. Parents' occupational and educational information for 8th and 11th graders is provided by the students.

Envelopes containing completed teacher questionnaires and completed student answer sheets are mailed for scanning, scoring, and compilation by a commercial firm.



This 72-page technical manual discusses in detail the quality education goals and the measurement devices associated with each, including goal and measurement rationales, scale descriptions, and specifications for scoring. The manual also describes the safeguards used to produce tests of high quality and how the EQA instruments fare on these checks.

The EQA Inventory

The present EQA Inventory contains 14 separate areas for each grade–5, 8 and 11. Areas assessed include the following:

Cognitive Areas

Reading
Writing Skills
Mathematics
Knowledge of Law/Government
Health Knowledge – Grade 5
Career Awareness
Knowledge of Human Accomplishments
Information Usage

Affective Areas

Self-Esteem
Understanding Others
Interest in School and Learning
Societal Responsibility
Health and Safety Practices – Grades 8 & 11
Creative Activities
Appreciating Human Accomplishments

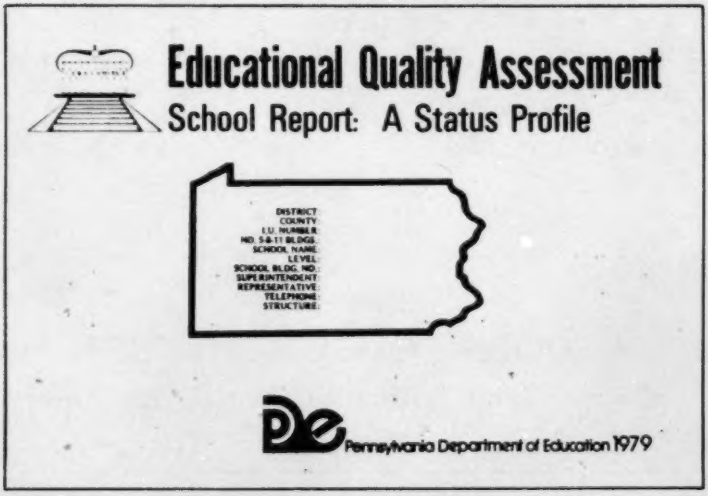
The questionnaire contains about 600 items from the areas assessed, plus questions on students' backgrounds, activities and perceptions. This latter information, along with responses on the teacher questionnaires, provides the condition variables which enable schools to compare themselves with schools with similar resources and similar student information.

Pennsylvania
STUDENT QUESTIONNAIRE
Elementary Intermediate Secondary
(Grade 5) (Grade 8) (Grade 11)

From 1969 to 1977, EQA was based on census testing. Here all students in a grade were tested on *all* the items in the package. In the revised assessment, EQA introduced *matrix sampling* to shorten testing to about two hours. In matrix sampling, each student takes only a portion of the total number of items in a scale. For instance, in grade 5 there are three forms; and 20 of the 60 math items are

assigned to each form. The questionnaire booklets are packaged so that every third 5th grader receives the same form. This means one-third of the 5th grade students in a school receive Form A, another Form B, and a final third Form C.

Each section measures some aspect of one of the education goals, with multiple-choice questions appraising student performance in several knowledge areas. The questionnaire examines (1) social and health habits, (2) feelings toward self and others, and (3) value placed on learning and human accomplishments. For the attitudinal sections, there are no "right" or "wrong" answers in the traditional sense. For scoring purposes, however, there are preferred responses based on generally accepted standards of behavior.



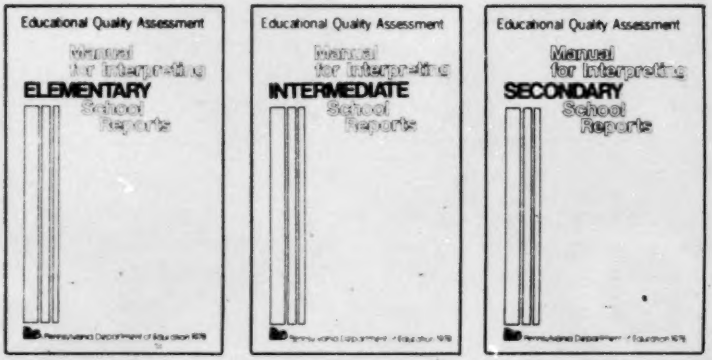
Front cover page of typical School Report

Reporting to the Schools

About six months after the completed questionnaires are sent in for scoring and compilation, EQA staff members deliver and interpret the reports at the schools. Five types of information are in the report: (1) percentile rank of the student body in each goal area as compared to a statewide

reference group, (2) the status of the student body as compared to schools having similar sets of home, community and school characteristics, (3) the school's relative standing on measures of home, community and school characteristics, (4) the student body's criterion-referenced scores on various goal areas, and (5) data for each item on the questionnaire.

Manuals for interpreting school reports at each grade level accompany the reports, and an EQA staff member who delivers them on-site – spends up to three hours interpreting the district's results. Since reports are lengthy and complex–and a district may receive results for as many as six or seven schools–the EQA staff usually discusses only one of the reports in depth, highlighting reports for the remaining schools.



EQA Interpreter's Manuals for Grades 5, 8 and 11

Percentile Rank in the State

The school's percentile rank in the state on each goal is determined by comparing the school score to the scores of other schools. Percentile scores range from 1 to 99. A percentile score of 75, for example, means that 75 percent of the schools in the state sample scored *lower* than the school at the 75th percentile. It does not mean that the students of the school answered 75 percent of the questions correctly or favorably.

Comparisons to Predicted Scores

A frequent objection to "normative" scoring illustrated by percentile ranking is that it fails to incorporate the whole difference in schools. In a state as large and heterogeneous as Pennsylvania, one can easily think of the vastly different resources–physical facilities, financial resources, teachers and, possibly most important, the home conditions which influence the students–under which schools operate. The Commonwealth contains such disparate school communities as rural-farming areas, coal-mining areas, big cities, small towns, affluent suburbs and working-class suburbs, to name a few.

Some diverse conditions limit what a school can expect in the way of student performance. Other conditions give schools distinct advantages. Sometimes home and community conditions help or hinder school success. Therefore, it seems logical to take the conditions about the students, teachers, parents and school into account when making comparisions. This "condition" information is collected from school and department records, teachers and students and is used in a prediction process.

Correlations between these conditions and school scores are then computed and used to predict a score range for each area measured. The predicted score range, while not a value judgment about the school, is based on the knowledge that other schools operating under a similar set of conditions tend to score about the same. The prediction method allows a school to ask: *Are we within our prediction range? Above in any goal areas? Below in any areas?* Another way of viewing this question is: *In Goal Y, how are we doing compared to schools with a similar set of conditions, or with resources or limitations similar to ours?*

Relative Standing on Condition Variables

The school also receives its standing on the condition variables which were identified and measured to calculate the specific scores. Many people find their standings on these variables – socioeconomic status of the parents, teacher

satisfaction, stability of residence, parental attitude toward school, home climate, etc. – of considerable interest. The kinds and number of variables collected differ with the grade level being assessed.

The school is given a percentile rank to show its relative standing on each of 35 conditions and resources, some of which are shown here as an example:

CONDITION VARIABLES

VARIABLE AND COMPUTER CODE	MEASURE	WEIGHTING	INDEX DESCRIPTION
GRENROLL (Grade enrollment)	The school administrator reported enrollment of the grade under consideration.	Actual number of students in the participating grade.	A higher value indicates a larger grade enrollment.
PCTTITLI (Percentage of eligible Title I students)	The per cent of students reported to the Department that are eligible for Title I.	Expressed to nearest tenth of a per cent.	A higher value indicates a higher per cent of students from low income families.
TUITION (Tuition rate)	The tuition rate established for the school district was obtained from Department records.	Expressed to nearest whole dollar for 1977-1978.	A higher value indicates that the district claims to expend relatively more funds per student.
TLOCALE (Teacher locale)	The teachers reported where they graduated from high school.	0= 100 miles or more from boundaries of the school district 1 = More than 30 miles but less than 100 miles 2= In or within 30 miles	A higher value indicates that the school teaching staff is more often drawn from local areas.

Criterion-Referenced Scoring

For "criterion-referenced" scoring, the student's responses are considered either favorable or unfavorable. If a student answers a majority of the items favorably, that student is said to have reached a criterion–a minimum positive attitude. The number of such students is tallied for the school and expressed as a percentage of all the students tested. For instance, one might discover that 65 percent of the school's grade 11 students have a minimum positive attitude. Conversely, 35 percent of the students don't answer a majority of the items favorably and could use some help.

Criterion-referenced information is given not only for each attitudinal goal but for the cognitive (knowledge) areas. In cognitive cases, "favorable" is equal to "correct."

In addition, in this modified criterion-referenced approach, a school learns not only the percentage of its students satisfying the criterion, but also the percentage of students statewide answering a majority of the items favorably. This means the school can compare itself with the students in the state as a whole.

Item Response Data

Item response data are information on the percentage of students in a school who give the correct answer for each item on the knowledge tests and each of the possible answers on the attitudinal measures. Such data are useful for diagnosing strengths and weaknesses.

Item response data, the least manupulated and the least subject to question, can be used as an absolute scale. This means that the percentage of students who respond to each of the options presented can be viewed for the facts it presents, regardless of comparative data. For example, if 50 percent of the students of a school say they "strongly disagree" and 25 percent more say they "mostly disagree" to the item *I like school*,which tells the school administrator that many students are unhappy about their school experiences.

A school's item response data can also be compared with the statewide item data. Such a comparison can help schools identify items contributing to low goal scores.

Sample School Report

The school report consists of 23 pages, one of which is replicated here to show graphically the school score (the average score of the 5th grade students) on each of the 14 areas measured.

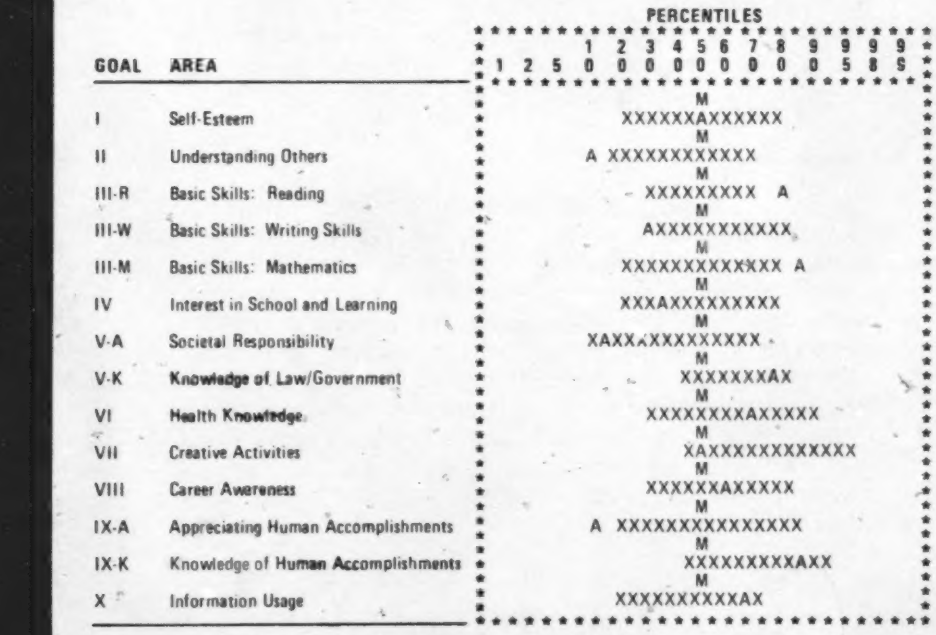
The column of **M's** shows the median score (50th percentile) for each area. Half the normative schools scored above that point, half below. The *A* represents the actual score of the school on each area. On Mathematics, the school score is at the 86th percentile; that is, the sample school scored above 86 per cent of the schools in the state normative sample, while 14 per cent of the schools received higher scores.

Looking at all the goal areas, one can get a profile of the school's strengths and weaknesses. Using the state rank alone, the strong areas appear to be Goals III-R, III-M, V-K and IX-K. The weak areas are Goals, II, V-A and IX-A.

The row of X's for each goal represents the band of expectation for the school, that is, what one would *expect* or *predict* the school score to be, given its standing on the condition variables which identify the school's resources.

A multiple regression analysis is used to compute the predicted scores. No value judgments are involved. It is a statistical procedure which, by correlating scores with conditions, identifies which set of conditions is associated with high Goal I scores, for example. One is not saying what a school should score in a given area, but, rather, what one would expect the school to score.

On the example, using the standard of whether this school's actual score is within, above or below its prediction band, Goals III-R and III-M appear as strong areas. In Goals II and IX-A, scores fall below those of schools with a set of conditions similar to those of the sample school.


PERCENTILES
1 2 5 10 20 30 40 50 60 70 80 90 95 98
GOAL AREA
I Self-Esteem
II Understanding Others
III-R Basic Skills: Reading
III-W Basic Skills: Writing Skills
III-M Basic Skills: Mathematics
IV Interest in School and Learning
V-A Societal Responsibility
V-K Knowledge of Law/Government
VI Health Knowledge
VII Creative Activities
VIII Career Awareness
IX-A Appreciating Human Accomplishments
IX-K Knowledge of Human Accomplishments
X Information Usage

N.B. An "A" in the table designates the location of the observed, actual school value.

"M" is used to represent the median (50th %ile). The band of X's is the prediction band.

Impact on School Districts

Follow-up surveys conducted about a year after assessment results are delivered indicate that EQA has a definite effect on school programs. School districts increasingly consider EQA results during their educational planning and decision-making. *(See comments on outside back cover).*

Districts are not mandated to make program changes solely on their EQA scores. In developing their long-range plans, however, they are asked to analyze their EQA results and to consider possible program modifications to improve students' performance on those goal areas assessed to be weak. They are equally free to accept or reject the scores. Most districts, though, take steps to reduce or eliminate negative influences brought to light by EQA results, as well as other tests and observations.

The Division of Educational Quality Assessment provides districts with information about certain programs that are working in other schools, suggested teaching techniques or strategies to improve instruction, methods of determining priorities, and those agencies where resources are available.

Conclusion

EQA will not cure all the ills of the schools. It offers no foolproof formulas or guarantees for improvement. Admittedly, EQA cannot supply all the answers surrounding today's mounting educational problems and complexities. But it does offer schools an unparalleled vantage point for looking at themselves, an information base, which is really only the starting point for self-analysis. The insight provided by the objective information generated in the school report – combined with the intimate knowledge of a district which only the local school officials and citizens can have – hopefully will help bring the concept of quality education closer to reality in Pennsylvania.

GOALS OF QUALITY EDUCATION

(Adopted by the State Board of Education on March 8, 1979)

COMMUNICATIONS SKILLS
Quality education should help every student acquire communication skills of understanding, speaking, reading and writing.

MATHEMATICS
Quality education should help every student acquire skills in mathematics.

SELF-ESTEEM
Quality education should help every student develop self-understanding and a feeling of self-worth.

ANALYTICAL THINKING
Quality education should help every student develop analytical thinking skills.

UNDERSTANDING OTHERS
Quality education should help every student acquire knowledge of different cultures and an appreciation of the worth of all people.

CITIZENSHIP
Quality education should help every student learn the history of the nation, understand its systems of government and economics and acquire the values and attitudes necessary for responsible citizenship.

ARTS AND THE HUMANITIES
Quality education should help every student acquire knowledge, appreciation and skills in the arts and the humanities.

SCIENCE AND TECHNOLOGY
Quality education should help every student acquire knowledge, understanding and appreciation of science and technology.

WORK
Quality education should help every student acquire the knowledge, skills and attitudes necessary to become a self-supporting member of society.

FAMILY LIVING
Quality education should help every student acquire the knowledge, skills and attitudes necessary for successful personal and family living.

HEALTH
Quality education should help every student acquire knowledge and develop practices necessary to maintain physical and emotional well-being.

ENVIRONMENT
Quality education should help every student acquire the knowledge and attitudes necessary to maintain the quality of life in a balanced environment.

WHAT DISTRICT SUPERINTENDENTS ARE SAYING ABOUT PENNSYLVANIA'S EQA PROGRAM

"We feel the EQA, to a large degree, is a valid instrument to measure the goal areas of quality education. The instrument gave us an opportunity to see how well our school district is meeting these goals and thereby modify our program to better achieve these goals."

"Statewide use (of EQA) offers comparison not otherwise available. This comparison is most valuable. This exercise is worth the time and effort. The statistics and interpretation offer another approach to problem solving and direction."

"Very useful tool in helping establish district needs from which goals can be established to implement new and improved programs to upgrade district education."

"Provides objective measurement of general effectiveness of school operation within the limits of community size and composition. Allows an overall picture of the extent to which students are achieving the ten goals."

"It makes districts take a good look at themselves. There are several areas that also make you awaken. In these cases, you tend to overlook until you have a measurement device such as EQA. I would recommend the continuance of EQA."

"The biggest value of EQA was the opportunity it provided for self-examination. Our district held individual faculty meetings in each school where the results were carefully scrutinized."

"I feel EQA gives a nonbiased evaluation of a school system. It can give the school administration an idea in what areas they must channel their efforts to improve the curriculum and, in many ways, lends to better communication between the school and the general public."

"These tests call attention to some problem areas which had not been previously noted and speeds up action on problems which were thought to exist but on which limited action had been taken previously."

"It helped us evaluate our school in some areas where I, as an administrator, was interested in knowing how we would fare on an evaluation other than academic achievement."